



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/782,557 | 02/13/2001 | Vieri Vanghi | 4740-003 | 9662 |

24112 7590 02/13/2004

COATS & BENNETT, PLLC
P O BOX 5
RALEIGH, NC 27602

| |
|----------|
| EXAMINER |
|----------|

MILORD, MARCEAU

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2682

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,557

Applicant(s)

VANGHI, VIERI

Examiner

Marceau Milord

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne et al (US Patent No 6574473 B2) in view of Sakamoto et al (US Patent No 5924042).

Regarding claims 1-5, 10, Rinne et al discloses a method of managing radio network access in an access terminal (figs. 3- 4 and fig. 6), the method comprising: establishing (RNC and BS of fig. 4) a connection with a first radio network (col. 5, lines 35- 55; col. 7, lines 34- 67); suspending communication with said first radio network to communicate with a second radio network (col. 5, line 46- col. 6, line 21; col. 8, lines 1- 29); monitoring (RNC of figs. 13- 14) the time communication with said first radio network is suspended while communicating with said second radio network (col. 13, line 31- col. 14, line 28; col. 16, lines 32- 67).

However, Ronnie et al does not specifically disclose the steps of resuming communication with said first radio network using said previously established connection with

Art Unit: 2682

said first radio network if the duration of suspended communication does not exceed a maximum suspension time; and requesting a new connection with said first radio network if the duration of suspended communication exceeds said maximum suspension time.

On the other hand, Sakamoto et al, from the same field of endeavor, discloses a mobile communication system composed by disposing plural cells in every location registration area, capable of presenting plural types of communication service to mobile stations. The allowable limit time for paging upon occurrence of call to a mobile station is specified in each type of call, a timer function for monitoring the paging time is provided, information of allowance of delay of call connection is added to the call to a mobile station (col. 4, lines 39-col. 5, line 26; col. 6, lines 4-65). Furthermore, Sakamoto shows in figure 33, a mobile station that transmits a channel suspension request to a second base station. The second base station transmits the channel suspension request to the control apparatus 50. In addition, the mobile station or calling terminal of the mobile station transmits a call re-setup request to the control apparatus 50. When the transmission speed is lower than the threshold, the control apparatus transmits a radio channel assignment instruction for assigning a radio channel for communication of mobile station newly to the second base station. In contrast, when the transmission speed is higher than the threshold, the control apparatus 50 transmits a channel re-assignment reject to the mobile station through the second base station (means maximum suspension time; fig. 10, figs. 33-37; col. 42, line 33-col. 43, line 57; col. 45, line 46- col. 46, line 67; col. 47, line 3- col. 48, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Sakamoto to the communication system of Rinne in order to allow an

Art Unit: 2682

interrupted packet data call to be re-established from either one of a pair of transceiving devices communicating in the packet data call.

Regarding claim 6, Rinne et al as modified discloses a method of managing radio network access in an access terminal (figs. 3- 4 and fig. 6) wherein said access terminal requests a new connection with said first radio network by transmitting a connection request message to said first radio network (col. 9, lines 7- 54; col. 10, lines 1- 36).

Regarding claim 7, Rinne et al as modified discloses a method of managing radio network access in an access terminal (figs. 3- 4 and fig. 6) wherein said connection request message transmitted by said mobile terminal to said first radio network includes a dropped call indication to notify said first radio network that a previously established connection with said first radio network was terminated (col. 8, lines 1- 51; col. 9, lines 11- 54).

Regarding claim 8, Rinne et al as modified discloses a method of managing radio network access in an access terminal (figs. 3- 4 and fig. 6) wherein said first radio network comprises an IS-856 radio network (col. 2, lines 34- 64).

Regarding claim 9, Rinne et al as modified discloses a method of managing radio network access in an access terminal (figs. 3- 4 and fig. 6) wherein said second radio network comprises an IS-2000 radio network (fig. 3; col. 2, line 65- col. 3, line 41).

Regarding claims 11-15, Rinne et al discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), said method comprising: establishing (RNC and BS of fig. 4) a connection with an access terminal (col. 5, lines 35- 55; col. 7, lines 34- 67).

However, Ronnie et al does not specifically disclose the step of transmitting a maximum suspension time to said access terminal to indicate the maximum allowed suspension time.

On the other hand, Sakamoto et al, from the same field of endeavor, discloses a mobile communication system composed by disposing plural cells in every location registration area, capable of presenting plural types of communication service to mobile stations. The allowable limit time for paging upon occurrence of call to a mobile station is specified in each type of call, a timer function for monitoring the paging time is provided, information of allowance of delay of call connection is added to the call to a mobile station (col. 4, lines 39-col. 5, line 26; col. 6, lines 4-65). Furthermore, Sakamoto shows in figure 33, a mobile station that transmits a channel suspension request to a second base station. The second base station transmits the channel suspension request to the control apparatus 50. In addition, the mobile station or calling terminal of the mobile station transmits a call re-setup request to the control apparatus 50. When the transmission speed is lower than the threshold, the control apparatus transmits a radio channel assignment instruction for assigning a radio channel for communication of mobile station newly to the second base station. In contrast, when the transmission speed is higher than the threshold, the control apparatus 50 transmits a channel re-assignment reject to the mobile station through the second base station (means maximum suspension time; fig. 10, figs. 33-37; col. 42, line 33-col. 43, line 57; col. 45, line 46- col. 46, line 67; col. 47, line 3- col. 48, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Sakamoto to the communication system of Rinne in order to allow an interrupted packet data call to be re-established from either one of a pair of transceiving devices communicating in the packet data call.

Regarding claim 16, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), comprising receiving a connection request from said access terminal to establish a new connection following termination of an earlier connection (col. 5, lines 14- 55; col. 8, lines 25- 51).

Regarding claim 17, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), wherein said connection request received from said access terminal includes a dropped call indication notifying said radio network that said earlier connection with said access terminal was terminated (col. 8, lines 1- 51; col. 9, lines 11- 54).

Regarding claim 18, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), comprising giving said access terminal priority access to said first radio network if said connection request includes a dropped call indication (col. 9, lines 7- 40; col. 10, lines 4- 36).

Regarding claim 19, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), wherein said radio network comprises an IS-856 radio network (col. 2, lines 34- 64).

Regarding claims 20-24, Rinne et al discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), the method comprising: establishing (RNC and BS of fig. 4) a connection between an access terminal and a first radio network (col. 5, lines 35- 55; col. 7, lines 34- 67); suspending communication with said first radio network by said access terminal to communicate with a second radio network (col. 5, line 46- col. 6, line 21; col. 8, lines 1- 29); monitoring (RNC of figs. 13-14), at said access terminal, the time communication with

Art Unit: 2682

said first radio network is suspended while said access terminal is communicating with said second radio network(col. 13, line 31- col. 14, line 28; col. 16, lines 32- 67).

However, Ronnie et al does not specifically disclose the steps of transmitting a maximum suspension time from said first radio network to said access terminal; resuming communication by said access terminal with said first radio network using said previously established connection with said first radio network if the duration of suspended communication does not exceed said maximum suspension time; and requesting a new connection by said access terminal with said first radio network if the duration of suspended communication exceeds said maximum suspension time.

On the other hand, Sakamoto et al, from the same field of endeavor, discloses a mobile communication system composed by disposing plural cells in every location registration area, capable of presenting plural types of communication service to mobile stations. The allowable limit time for paging upon occurrence of call to a mobile station is specified in each type of call, a timer function for monitoring the paging time is provided, information of allowance of delay of call connection is added to the call to a mobile station (col. 4, lines 39-col. 5, line 26; col. 6, lines 4-65). Furthermore, Sakamoto shows in figure 33, a mobile station that transmits a channel suspension request to a seconds base station. The second base station transmits the channel suspension request to the control apparatus 50. In addition, the mobile station or calling terminal of the mobile station transmits a call re-setup request to the control apparatus 50. When the transmissions peed is lower than the threshold, the control apparatus transmits a radio channel assignment instruction for assigning a radio channel for communication of mobile station newly to the second base station. In contrast, when the transmission speed is higher than the threshold,

Art Unit: 2682

the control apparatus 50 transmits a channel re-assignment reject to the mobile station through the second base station (means maximum suspension time; fig. 10, figs. 33-37; col. 42, line 33- col. 43, line 57; col. 45, line 46- col. 46, line 67; col. 47, line 3- col. 48, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Sakamoto to the communication system of Rinne in order to allow an interrupted packet data call to be re-established from either one of a pair of transceiving devices communicating in the packet data call.

Regarding claim 25, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), comprising receiving a connection request at said first radio network from said access terminal to establish a new connection following termination of an earlier connection (col. 5, lines 14- 55; col. 8, lines 25- 51).

Regarding claim 26, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), wherein said connection request transmitting by said access terminal to said first radio network includes a dropped call indication notifying said first radio network that said earlier connection with said access terminal was terminated (col. 8, lines 1- 51; col. 9, lines 11- 54).

Regarding claim 27, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), comprising giving said access terminal priority access to said first radio network if said connection request includes a dropped call indication (col. 9, lines 7- 40; col. 10, lines 4- 36).

Regarding claim 28, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), wherein said first radio network comprises an IS-856 radio network (col. 2, lines 34- 64).

Regarding claim 29, Rinne et al as modified discloses a method of managing radio network access in a radio network (figs. 3- 4 and fig. 6), wherein said second radio network comprises an IS-2000 radio network (fig. 3; col. 2, line 65- col. 3, line 41).

Regarding claims 30-31, Rinne et al discloses an access terminal comprising: a dual mode transceiver (fig. 3) for communicating with a first radio network in a first mode and a second radio network in a second mode (col. 2, line 65-col. 3, line 8; col. 5, lines 35- 55); a controller programmed to: establish (RNC and BS of fig. 4) communication with said first radio network in said first mode (col. 5, lines 35- 55; col. 7, lines 34- 67); suspend communication with said first radio network in said second mode (col. 5, line 46- col. 6, line 21; col. 8, lines 1- 29); maintain a timer (RNC0 of figs. 13-14) in said second mode to monitor the time communication with said first network is suspended (col. 13, line 31- col. 14, line 28; col. 16, lines 32- 67).

However, Ronnie et al does not specifically disclose the steps of resuming communication with said first radio network using said previously established connection with said first radio network if the duration of suspended communication does not exceed a maximum suspension time; requesting a new connection with said first radio network if the duration of suspended communication exceeds said maximum suspension time.

On the other hand, Sakamoto et al, from the same field of endeavor, discloses a mobile communication system composed by disposing plural cells in every location registration area,

Art Unit: 2682

capable of presenting plural types of communication service to mobile stations. The allowable limit time for paging upon occurrence of call to a mobile station is specified in each type of call, a timer function for monitoring the paging time is provided, information of allowance of delay of call connection is added to the call to a mobile station (col. 4, lines 39-col. 5, line 26; col. 6, lines 4-65). Furthermore, Sakamoto shows in figure 33, a mobile station that transmits a channel suspension request to a second base station. The second base station transmits the channel suspension request to the control apparatus 50. In addition, the mobile station or calling terminal of the mobile station transmits a call re-setup request to the control apparatus 50. When the transmission speed is lower than the threshold, the control apparatus transmits a radio channel assignment instruction for assigning a radio channel for communication of mobile station newly to the second base station. In contrast, when the transmission speed is higher than the threshold, the control apparatus 50 transmits a channel re-assignment reject to the mobile station through the second base station (means maximum suspension time; fig. 10, figs. 33-37; col. 42, line 33-col. 43, line 57; col. 45, line 46- col. 46, line 67; col. 47, line 3- col. 48, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Sakamoto to the communication system of Rinne in order to allow an interrupted packet data call to be re-established from either one of a pair of transceiving devices communicating in the packet data call.

Regarding claim 32, Rinne et al as modified discloses an access terminal comprising: a dual mode transceiver (fig. 3) wherein said connection request message includes a dropped call indication to notify said first radio network that an earlier connection with said first radio network was terminated (col. 8, lines 1- 51; col. 10, lines 4- 36; col. 10, lines 57- 67).

Art Unit: 2682

Regarding claims 33-36, Rinne et al discloses radio network (figs. 3- 4 and fig. 8) comprising: a base transceiver station (fig. 4 and fig. 8) for communicating with an access terminal (col. 5, lines 35-55); a base station controller (fig. 4 and fig. 8) programmed to: establish a connection with said access terminal (col. 5, lines 35- 55; col. 7, lines 34- 67).

However, Ronnie et al does not specifically disclose the step of transmitting a maximum suspension time to said access terminal to indicate a maximum allowed suspension time before communication with said access terminal will be terminated.

On the other hand, Sakamoto et al, from the same field of endeavor, discloses a mobile communication system composed by disposing plural cells in every location registration area, capable of presenting plural types of communication service to mobile stations. The allowable limit time for paging upon occurrence of call to a mobile station is specified in each type of call, a timer function for monitoring the paging time is provided, information of allowance of delay of call connection is added to the call to a mobile station (col. 4, lines 39-col. 5, line 26; col. 6, lines 4-65). Furthermore, Sakamoto shows in figure 33, a mobile station that transmits a channel suspension request to a second base station. The second base station transmits the channel suspension request to the control apparatus 50. In addition, the mobile station or calling terminal of the mobile station transmits a call re-setup request to the control apparatus 50. When the transmission speed is lower than the threshold, the control apparatus transmits a radio channel assignment instruction for assigning a radio channel for communication of mobile station newly to the second base station. In contrast, when the transmission speed is higher than the threshold, the control apparatus 50 transmits a channel re-assignment reject to the mobile station through the second base station (means maximum suspension time; fig. 10, figs. 33-37; col. 42, line 33-

Art Unit: 2682

col. 43, line 57; col. 45, line 46- col. 46, line 67; col. 47, line 3- col. 48, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Sakamoto to the communication system of Rinne in order to allow an interrupted packet data call to be re-established from either one of a pair of transceiving devices communicating in the packet data call.

Regarding claim 37, Rinne et al as modified discloses radio network wherein said base station controller (RNC of fig. 4 of fig. 4) is further programmed to grant said access terminal priority access to said first radio network if an earlier established connection was terminated by said base station controller (fig. 7; col. 8, lines 14- 57; col. 10, lines 4- 36).

Response to Arguments

2. Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MARCEAU MILORD

Marceau Milord

Examiner

Art Unit 2682